



Ecosystem Service	Soil quality by weathering processes
CICES class name	Weathering processes and their effect on soil quality
CICES Section	Regulation & Maintenance (Biotic)
CICES Class code	2.2.4.1

Brief Description

- Ensuring soils form and develop
- Decomposition of minerals that helps maintain soil fertility

Sample Indicators

Indicator values from			
Experiment or direct measurement		Survey	
Expert assessment		Statistical- or census data	
Model or GIS		Literature values	
Stakeholder participation		Not provided	

Table 1: Regional Scale

Indicator	Unit	Indicator values from
^[1] Net annual prevention of soil erosion through soil formation	t * ha ⁻¹ * yr ⁻¹	, ,
^[2] Soil formation and erosion prevention: expert-based index for ecosystem service provision by land cover class [1-5], multiplied by the area of the land cover class	km ²	, ,
^[2] Soil formation and erosion prevention value: expert-based index for ecosystem service provision by land cover class [1-5], multiplied by the area of the land cover class and a literature-based monetary value of the ecosystem service	\$ * yr ⁻¹	, ,

Table 2: National Scale

Indicator	Unit	Indicator values from
^[3] Share of organic farming	%	



[3] Soil organic matter content	%	
[3] pH of topsoil	-	
[3] Cation exchange capacity	cmol(+) * kg ⁻¹	

References

No.	Citation
1	Adhikari S, Baral H, Nitschke CR (2018) Identification, Prioritization and Mapping of Ecosystem Services in the Panchase Mountain Ecological Region of Western Nepal. <i>Forests</i> 9(9): 554. DOI: 10.3390/f9090554
2	Huq N, Bruns A, Ribbe L (2019) Interactions between freshwater ecosystem services and land cover changes in southern Bangladesh: A perspective from short-term (seasonal) and long-term (1973-2014) scale. <i>Science of the Total Environment</i> 650: 132-143. DOI: 10.1016/j.scitotenv.2018.08.430